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SEP 05 2006

PATENT

Serial No. 10/029,812

Amendment in Reply to Office Action mailed on June 7, 2006

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for detecting commercials in a compressed video stream, the method comprising the ~~steps~~ acts of:
compressing video data and generating compressed video data;
detecting a plurality of separators based on said generated compressed video data, each of said separators is defined by at least two consecutive scene changes;
determining the beginning and ending of a commercial break among said plurality of separators by comparing a gap between said plurality of separators.

2. (Currently amended) The method of claim 1, wherein the step act of determining the beginning and ending of a commercial break further comprises the ~~step~~ act of:

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identifying one of said separators as the beginning of a commercial break when the gap between said one separator and a previous separator is greater than a predetermined threshold value.

3. (Currently amended) The method of ~~claim 2~~ claim 1, ~~further comprising wherein the step act of determining the beginning and ending of a commercial break further comprises the acts of:~~

identifying one of said separators as the ending of a commercial break when the gap between said one separator and a next separator is greater than ~~said a~~ a predetermined threshold value.
~~(no: when the gap between the separator and the next one is greater than a predetermined threshold)~~

4. (Original) The method of claim 1, wherein said plurality of separators is inserted into said video data at a transmitting source.

5. (Currently Amended) The method of claim 1, wherein the ~~step act~~ act of detecting said plurality of separators in said compressed video data includes identifying an abrupt increase in an

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average Mean Absolute Difference (MAD) value of said generated
compressed video data.

6. (Currently Amended) The method of claim 1, wherein the ~~step~~
act of detecting said plurality of separators in said compressed
video data is performed based on an increase in an average Mean
Absolute Difference (MAD) value of said generated compressed video
data.

7. (Currently Amended) A method for detecting commercials in a
compressed video stream, the method comprising the ~~steps~~ acts of:

encoding incoming video data received from a transmitting
source to generate compressed video data;

detecting a plurality of separators in said generated
compressed video data, each of said plurality of separators
including at least two consecutive scene changes ~~according to said~~
~~compressed video data~~;

determining the beginning and ending of a commercial break by
comparing a gap between said plurality of separators to a
predetermined threshold value;

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identifying one of said separators as the beginning of a commercial break when the gap between said one separator and a previous separator is greater than said predetermined threshold value; and,

identifying another one of said separators as the ending of a commercial break when the gap between said another one separator and a next separator is greater than said predetermined threshold value.

8. (Currently Amended) The method of claim 7, wherein said plurality of separators is selectively inserted into said incoming video data at said transmitting source.

9. (Currently Amended) The method of claim 7, wherein the step act of detecting said plurality of separators in said compressed video data is performed based on a change in an average Mean Absolute Difference (MAD) value of said generated compressed video data.

10. (Currently Amended) An apparatus for detecting commercials

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in a compressed video stream, comprising:

a video encoder for receiving uncompressed video data and generating compressed video data;

a detector for detecting a plurality of separators in said compressed video data, each of said separators being defined by at least two consecutive scene changes;

a processor configured to edit said compressed video data by identifying the beginning and ending of a commercial break in said compressed video data; and,

a playback selector for editing said compression video data to skip said commercial break for a subsequent viewing.

11. (Original) The apparatus of claim 10, further comprising a memory for storing said compressed video data with the identification of the beginning and ending of said commercial break.

12. (Original) The apparatus of claim 10, further comprising a decoder for generating decompressed video data.

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13.(Original) The apparatus of claim 10, wherein said compressed video data includes an identifier of a presence of a sequence of uni-color frames.

14.(Original) The apparatus of claim 10, wherein said compressed video data includes an identifier of a transition between a television program and said commercial break.

15.(Original) The apparatus of claim 10, wherein said compressed video data includes an identifier of a transition between the successive commercial programs.

16.(Original) The apparatus of claim 10, wherein said compressed video data includes an identifier of at least two successive scene cuts.

17.(Original) The apparatus of claim 10, wherein said detector detects said plurality of separators based on an abrupt change in an average Mean Absolute Difference (MAD) value of said generated compressed data.

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18. (Original) The apparatus of claim 10, wherein said compressed video data includes at least one of a quantizer scale, motion vector data, bit rate data, a variation of luminance within a frame, a variation of color within a frame, a total luminance of a frame, a total color of a frame, change in luminance between frames, a mean absolute difference, and a quantizer scale.

19. (Currently Amended) The apparatus of claim ~~10~~ 12, wherein said processor is programmed to identify an indicator of at least two scene cuts in said ~~uncompressed~~ decompressed video data and to generate an identifier of the location in a sequence of said decompressed video data coinciding with said indicator of at least two said scene cuts.